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March 8, 2021

**ADVICE 4437-E  
(U 338-E)**

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA  
ENERGY DIVISION

**SUBJECT:** Southern California Edison Company's Quarterly Advice Letter Pursuant to Public Utilities Code (PUC) Section 8389(e)(7) Regarding the Implementation of Its Approved Wildfire Mitigation Plan and Its Safety Culture Assessment and Safety Recommendations

Southern California Edison Company (SCE) hereby submits this Tier 1 Advice Letter (AL) detailing the implementation of its approved 2020-2022 Wildfire Mitigation Plan (WMP),<sup>1</sup> recommendations of the most recent safety culture assessment, a statement of the recommendations of its board of directors' safety committee<sup>2</sup> (Committee) meetings that occurred during the fourth quarter of 2020, and a summary of the implementation of Committee recommendations during the third quarter of 2020.<sup>3</sup>

**PURPOSE**

The purpose of this advice letter is to comply with the provisions of PUC Section 8389(e)(7), established by California Assembly Bill (AB) 1054.

**BACKGROUND**

AB 1054 was signed into law by Governor Newsom on July 12, 2019. Section 8389(e)(7), which was added to the PUC by AB 1054, reads:

The executive director of the commission shall issue a safety certification to an electrical corporation if the electrical corporation provides documentation

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- <sup>1</sup> CPUC WMP approval statement available at:  
<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M340/K129/340129782.PDF>.
- <sup>2</sup> SCE's board of directors' safety committee is known as the Safety and Operations Committee of the Board of Directors and referred to herein as the "Committee."
- <sup>3</sup> Advice 4327-E.

of the following . . . The electrical corporation is implementing its approved wildfire mitigation plan. The electrical corporation shall file a tier 1 advice letter on a quarterly basis that details the implementation of both its approved wildfire mitigation plan and recommendations of the most recent safety culture assessment, and a statement of the recommendations of the board of directors safety committee meetings that occurred during the quarter. The advice letter shall also summarize the implementation of the safety committee recommendations from the electrical corporation's previous advice letter filing. If the division has reason to doubt the veracity of the statements contained in the advice letter filing, it shall perform an audit of the issue of concern.

SCE provides the required information as indicated below:

(1) **Implementation of Wildfire Mitigation Plan**

On February 7, 2020, SCE submitted its second comprehensive WMP covering the years 2020 through 2022 and building on its 2019 WMP, including successes and lessons learned. After an extensive review process that included discovery, workshops, and comments, the CPUC approved SCE's 2020-2022 WMP on June 11, 2020.<sup>4</sup>

In 2020, SCE tracked 69 specific wildfire-related programs and activities included in its 2020-2022 WMP. As in SCE's 2019 WMP, the 2020-2022 plan includes wildfire mitigation activities such as infrastructure hardening, vegetation management, detailed inspections and remediations, and situational awareness. SCE's WMP also emphasizes Public Safety Power Shutoff (PSPS) resilience and community engagement, particularly for under-represented groups and access and functional needs customers. SCE's 2020-2022 plan increases the use of data, advanced risk analytics and innovative technologies to help the company prioritize the activities with the greatest potential to mitigate wildfire risks and improve public safety.

In Attachment A, SCE presents detailed information about the implementation status of meeting WMP 2020 Program Targets for each of these wildfire-related mitigation activities and programs. As referenced in Attachment A, SCE met or exceeded the majority of 2020 goals listed in its 2020-2022 WMP and substantially completed the remaining activities.

COVID-19-related restrictions and, in recent months, fires and the associated diversion of crews, poor air quality, and US Forest Service work stoppages as well as heat waves had an impact on the implementation plans for a few WMP

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<sup>4</sup> CPUC WMP approval statement available at:  
<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M340/K129/340129782.PDF>.

activities (distribution and transmission inspection-driven remediations, aerial inspections, and unmanned aerial operations training). Attachment A (Appendix) provides more details on these Behind Plan activities including plans to identify and prioritize pending activities in 2021.

## **(2) Implementation of Most Recent Safety Culture Assessment**

Safety is the first of SCE's core values and this is demonstrated through the company's commitment to creating and maintaining a safe environment for employees, contractors, and the public. SCE continues to improve its safety culture via leadership engagement, trainings, corporate messaging and the incorporation of feedback from all levels of the organization.

The Wildfire Safety Division (WSD) has recently published Safety Culture Assessment (SCA) Requirements of electrical corporations<sup>5</sup> and plans to conduct its first assessment for individual electrical corporations in the summer of 2021. SCE looks forward to working with WSD and other interested stakeholders in 2021 to review its safety culture and build upon existing efforts to strengthen it.

## **(3) Recommendations of Safety and Operations Committee**

The Committee had two regular meetings during the fourth quarter of 2020 (on October 21, 2020 and December 9, 2020). During these meetings, the Committee focused on wildfire and safety issues in the following categories: Wildfire Safety and Worker and Public Safety, among other topics (e.g., cybersecurity). Each of these areas is separately addressed below. In addition to quarterly meetings, the Committee Chair meets regularly with Management to discuss wildfire and worker safety issues.

### **Wildfire Safety**

Discussions during fourth quarter meetings covered an overview of the 2020 fire season to date, additional risk analysis and mitigation efforts, SCE's response to WSD's identified Class B deficiencies under the WMP, and wildfire mitigation activities, particularly Public Safety Power Shutoff (PSPS) activities.

At the October meeting, the Committee received an update on the additional consequence risk analysis being performed and SCE's current and potential future expanded use of light detection and ranging technology (LiDAR) in wildfire

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<sup>5</sup> CPUC, Safety Culture Assessment (SCA) Requirements of Electrical Corporations, January 22, 2021, available at: [https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/About\\_Us/Organization/Divisions/WSD/WSD%20Safety%20Culture%20Assessment%20Requirements%20FINAL%2020210122.pdf](https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/About_Us/Organization/Divisions/WSD/WSD%20Safety%20Culture%20Assessment%20Requirements%20FINAL%2020210122.pdf)

risk mitigation. The Committee also received a status update of SCE's vegetation management program and reviewed operational learnings from recent fires including vegetation contractor performance and regulatory requirements. The Committee also received an update on PSPS operations during events to date, mitigation efforts focused on minimizing impact to customers and the ongoing risk reduction evaluations. The Committee also received a progress update on the WMP, including covered conductor installation and the use of drones to address the overhead inspection schedule that was impacted by the grounding due to safety concerns of a large helicopter contractor was provided. Management described the increased use of drones for aerial inspections for work that was initially planned to be conducted using helicopters and noted that the drones also performed follow-on inspections to get better images of certain equipment that was difficult to capture via helicopter.

Also at the October meeting, the Committee reviewed a summary of SCE's responses to Class B deficiencies as identified by WSD and the intervenor responses. Management also described the guidance provided by the WSD draft resolutions, including regarding the safety culture assessment process. Management noted that the guidance was consistent with AB 1054.

At the December meeting, the Committee received an update on wildfire mitigation activities including recent PSPS events, CPUC-reportable ignitions and WMP progress to date. The Committee and management discussed recent PSPS operations, including sectionalization improvements to reduce the number of customers impacted by outages, telecom providers' resiliency challenges, and feedback from local government entities. The Committee and management also discussed the role and responsibility of telecom operators to have resilient operations during PSPS events. Management also reported that it was reviewing risk evaluation and prioritization methodology in light of the significant increase in ignitions from secondary conductors and committed to report back to the Committee.

### **Worker and Public Safety**

The Committee received reports on worker safety at its fourth quarter meetings, discussing contractor and employee safety performance.

At the October meeting, as a follow-up to the Committee's request for additional oversight of this topic, a report on contractor management and contractor safety performance was provided, describing SCE's philosophy on the use of contractors, which gives SCE the ability to scale for the volume and pace of work. The report summarized industry benchmarking findings and the process of contractor evaluation and selection. Management also described the factors that may correlate to higher injury rates for contractors and the areas of contractor management that are under evaluation to address those factors, including for

smaller contractors that may lack the safety programs of larger firms. The Committee and management discussed contractor incentives and disincentives, determining metrics regarding quality, drivers for contractor selection, and the use of third-party ratings in the process. They also discussed the support of small contractors that are often diverse business enterprises and the development of corporate goals to address overall effectiveness of contractor management.

At the December meeting, the Committee received an overview of employee safety, primarily focused on employee safety performance, noting improved Days Away Restricted or Transferred (DART) metrics but continued challenges with serious injuries and fatalities, summarizing the analysis of the seven target districts with implemented safety action plans and noting the impact of strong local leadership on improved safety performance. Management and the Committee discussed the expansion of the safety action plans to other districts outside the initial seven evaluated. Management will continue to report progress on district-specific safety action plans to the Committee periodically.

In addition to the summary of wildfire and safety topics discussed during fourth quarter meetings above, the Committee made the following recommendations and requests:

1. The Committee supports management's continued focus on contractor safety and performance and recommended consideration of contractor management in the development of the 2021 corporate goals.
2. The Committee discussed the role and duty of telecom companies to inspect and maintain assets to improve safety, reduce ignition risk and provide resilient services as well as address in a timely fashion the repair and maintenance issues identified by SCE. The Committee recommended that management work with telecom partners and appropriate regulators and continue to review SCE practices and procedures related to telecom services.
3. The Committee recommended that management report back to the Committee on their risk evaluation and prioritization methodology in light of the significant increase in ignitions from secondary conductors.

#### (4) **Management Responses to Committee Recommendations**

In response to the Committee's recommendations in prior meetings, management provided the following responses during the fourth quarter meetings:

1. Recommendation (August 26, 2020): Benchmark the use of leading indicators and management practices for contractor safety performance and provide a report in a future meeting regarding any variances with current practices.

Management Response: At the October meeting, management provided information on benchmarking of the use of leading indicators and management practices for contractor safety performance, including vegetation management contractors, and reported on variances with current practices.

2. Recommendation (August 26, 2020): Provide a deep dive on the Safety Culture Assessment survey results of the districts targeted for further work on reducing DARTs; specifically looking at areas of opportunity for this group, and include similar analysis for locations where safety performance is high.

Management Response: At the December meeting, management provided a report on the Safety Culture Assessment survey results of the districts targeted for further work on reducing DARTs; specifically looking at areas of opportunity for this group, and discussing the expansion of the safety action plans to locations beyond the initial seven targeted areas.

3. Recommendation (October 21, 2020): At the October meeting, the Committee recommended consideration of contractor management in the development of the 2021 corporate goals.

Management response: At the December meeting, management provided updated draft 2021 operational goals including on contractor management.

The Committee held one special meeting and one regular first quarter meeting on January 28, 2021 and February 24, 2021 which will be summarized in the next quarterly AL. Additional meetings will be scheduled as appropriate.

No cost information is required for this AL.

This AL will not increase any rate or charge, cause the withdrawal of service, or conflict with any other schedule or rule.

### **TIER DESIGNATION**

Pursuant to General Order (GO) 96-B, Energy Industry Rule 5.1, this AL is submitted with a Tier 1 designation.

### **EFFECTIVE DATE**

SCE respectfully requests that this AL become effective March 8, 2021, which is the same date as submitted.

### **NOTICE**

Anyone wishing to protest this AL may do so by letter via U.S. Mail, facsimile, or electronically, any of which must be received no later than 20 days after the date of this advice letter. Protests should be submitted to:

CPUC, Energy Division  
Attention: Tariff Unit  
505 Van Ness Avenue  
San Francisco, California 94102  
E-mail: [EDTariffUnit@cpuc.ca.gov](mailto:EDTariffUnit@cpuc.ca.gov)

Copies should also be mailed to the attention of the Director, Energy Division, Room 4004 (same address above).

In addition, protests and all other correspondence regarding this AL should also be sent by letter and transmitted via facsimile or electronically to the attention of:

Gary A. Stern, Ph.D.  
Managing Director, State Regulatory Operations  
Southern California Edison Company  
8631 Rush Street  
Rosemead, California 91770  
Telephone (626) 302-9645  
Facsimile: (626) 302-6396  
E-mail: [AdviceTariffManager@sce.com](mailto:AdviceTariffManager@sce.com)

Tara S. Kaushik  
Managing Director, Regulatory Relations  
c/o Karyn Gansecki  
Southern California Edison Company  
601 Van Ness Avenue, Suite 2030  
San Francisco, California 94102  
Facsimile: (415) 929-5544  
E-mail: [Karyn.Gansecki@sce.com](mailto:Karyn.Gansecki@sce.com)

There are no restrictions on who may submit a protest, but the protest shall set forth specifically the grounds upon which it is based and must be received by the deadline shown above.

In accordance with General Rule 4 of GO 96-B, SCE is serving copies of this AL to the interested parties shown on the attached GO 96-B, R.18-10-007, R.18-12-005, and A.18-09-002 service lists. Address change requests to the GO 96-B service list should be directed by electronic mail to [AdviceTariffManager@sce.com](mailto:AdviceTariffManager@sce.com) or at (626) 302-4039. For changes to all other service lists, please contact the Commission's Process Office at (415) 703-2021 or by electronic mail at [Process\\_Office@cpuc.ca.gov](mailto:Process_Office@cpuc.ca.gov).

Further, in accordance with PUC Section 491, notice to the public is hereby given by submitting and keeping this AL at SCE's corporate headquarters. To view other SCE advice letters submitted with the Commission, log on to SCE's web site at <https://www.sce.com/wps/portal/home/regulatory/advice-letters>.

For questions, please contact Kavita Srinivasan at (626) 302-3709 or by electronic mail at [kavita.srinivasan@sce.com](mailto:kavita.srinivasan@sce.com).

**Southern California Edison Company**

/s/ Gary A. Stern, Ph.D.  
/s/ Gary A. Stern, Ph.D.

GAS:ks:jm  
Enclosure





# ADVICE LETTER SUMMARY

## ENERGY UTILITY



MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No.:

Utility type:

☐ ELC      ☐ GAS      ☐ WATER  
☐ PLC      ☐ HEAT

Contact Person:

Phone #:

E-mail:

E-mail Disposition Notice to:

### EXPLANATION OF UTILITY TYPE

ELC = Electric      GAS = Gas      WATER = Water  
PLC = Pipeline      HEAT = Heat

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #:

Tier Designation:

Subject of AL:

Keywords (choose from CPUC listing):

AL Type: ☐ Monthly ☐ Quarterly ☐ Annual ☐ One-Time ☐ Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #:

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL:

Summarize differences between the AL and the prior withdrawn or rejected AL:

Confidential treatment requested? ☐ Yes ☐ No

If yes, specification of confidential information:

Confidential information will be made available to appropriate parties who execute a nondisclosure agreement. Name and contact information to request nondisclosure agreement/ access to confidential information:

Resolution required? ☐ Yes ☐ No

Requested effective date:

No. of tariff sheets:

Estimated system annual revenue effect (%):

Estimated system average rate effect (%):

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected:

Service affected and changes proposed<sup>1</sup>:

Pending advice letters that revise the same tariff sheets:

<sup>1</sup>Discuss in AL if more space is needed.

**Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this submittal, unless otherwise authorized by the Commission, and shall be sent to:**

CPUC, Energy Division  
Attention: Tariff Unit  
505 Van Ness Avenue  
San Francisco, CA 94102  
Email: [EDTariffUnit@cpuc.ca.gov](mailto:EDTariffUnit@cpuc.ca.gov)

Name:  
Title:  
Utility Name:  
Address:  
City:  
State: Zip:  
Telephone (xxx) xxx-xxxx:  
Facsimile (xxx) xxx-xxxx:  
Email:

Name:  
Title:  
Utility Name:  
Address:  
City:  
State: Zip:  
Telephone (xxx) xxx-xxxx:  
Facsimile (xxx) xxx-xxxx:  
Email:

## ENERGY Advice Letter Keywords

Affiliate	Direct Access	Preliminary Statement
Agreements	Disconnect Service	Procurement
Agriculture	ECAC / Energy Cost Adjustment	Qualifying Facility
Avoided Cost	EOR / Enhanced Oil Recovery	Rebates
Balancing Account	Energy Charge	Refunds
Baseline	Energy Efficiency	Reliability
Bilingual	Establish Service	Re-MAT/Bio-MAT
Billings	Expand Service Area	Revenue Allocation
Bioenergy	Forms	Rule 21
Brokerage Fees	Franchise Fee / User Tax	Rules
CARE	G.O. 131-D	Section 851
CPUC Reimbursement Fee	GRC / General Rate Case	Self Generation
Capacity	Hazardous Waste	Service Area Map
Cogeneration	Increase Rates	Service Outage
Compliance	Interruptible Service	Solar
Conditions of Service	Interutility Transportation	Standby Service
Connection	LIEE / Low-Income Energy Efficiency	Storage
Conservation	LIRA / Low-Income Ratepayer Assistance	Street Lights
Consolidate Tariffs	Late Payment Charge	Surcharges
Contracts	Line Extensions	Tariffs
Core	Memorandum Account	Taxes
Credit	Metered Energy Efficiency	Text Changes
Curtailable Service	Metering	Transformer
Customer Charge	Mobile Home Parks	Transition Cost
Customer Owned Generation	Name Change	Transmission Lines
Decrease Rates	Non-Core	Transportation Electrification
Demand Charge	Non-firm Service Contracts	Transportation Rates
Demand Side Fund	Nuclear	Undergrounding
Demand Side Management	Oil Pipelines	Voltage Discount
Demand Side Response	PBR / Performance Based Ratemaking	Wind Power
Deposits	Portfolio	Withdrawal of Service
Depreciation	Power Lines	

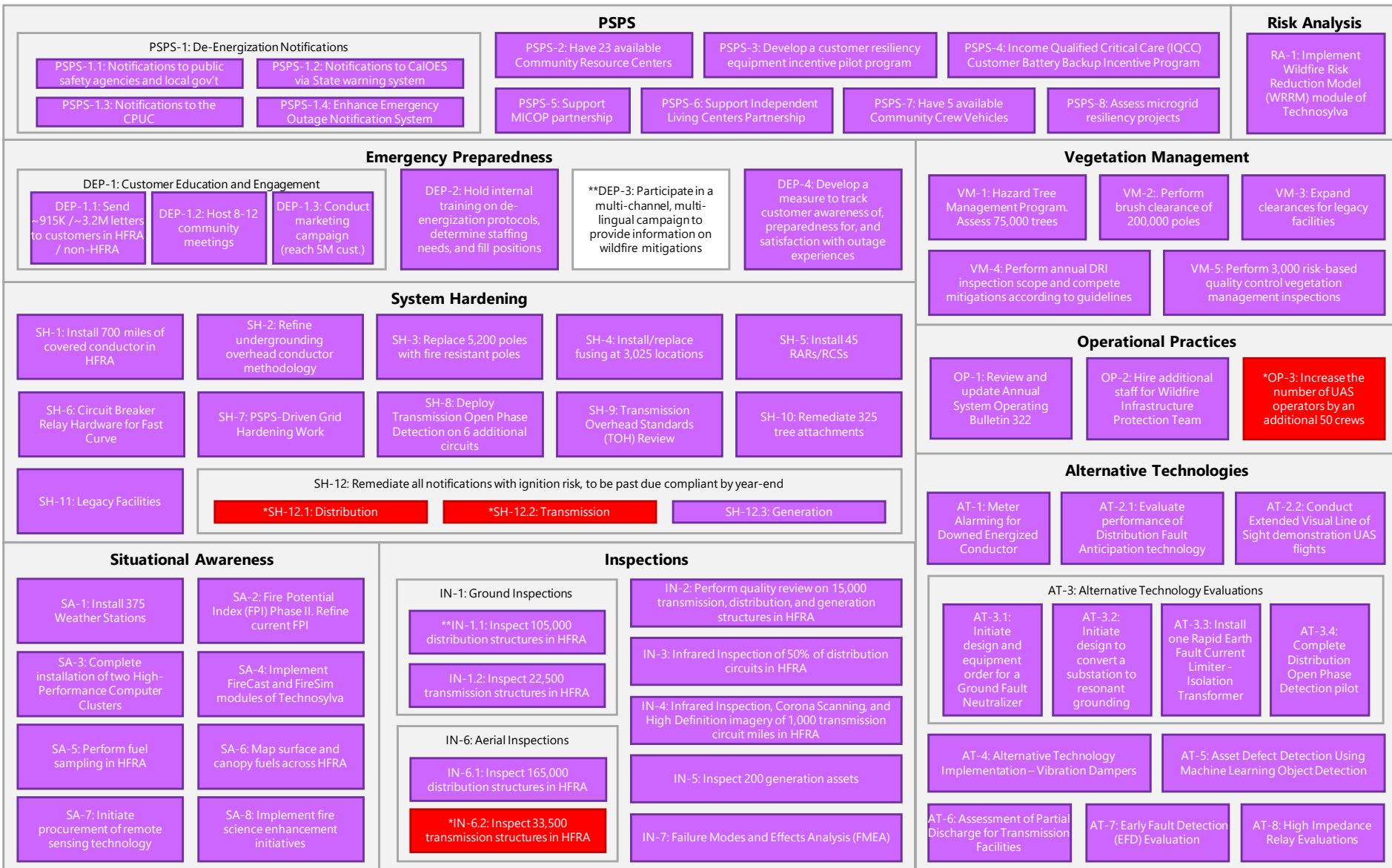
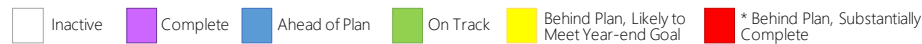
# **Attachment A**

# SCE's 2020-2022 Wildfire Mitigation Plan (WMP) Progress Update – Q4 2020

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(All data is as of December 31, 2020 or later)

# WMP Activities Summary



Source: All data is as of December 31, 2020 or later

\*\* The Change Report filed in September 2020 describes that SCE has ended its statewide campaign (DEP-3) and that SCE plans to inspect (IN-1) ~165,000 distribution and ~33,500 transmission structures in HFRA in 2020.

# WMP Activities Summary

Inactive
  Complete
  Ahead of Plan
  On Track
  Behind Plan, Likely to Meet Year-end Goal
  \* Behind Plan, Substantially Complete

## PSPS Activities

### Public Safety Agencies and Local Govt

#### **De-Energization Notifications (PSPS-1.1)**

Section 5.3.6.7 Page 171\*

**Program Target:** Notify applicable public safety agencies and local governments of possible de-energization

**Status Update:** Through the end of December the PSPS Incident Management Team (IMT) was activated for 12 events. Notifications were sent to stakeholders during each event.

### Enhance EONS

#### **Enhance Emergency Outage Notification System (PSPS-1.4)**

Section 5.3.6.7 Page 171

**Program Target:** Enhance Emergency Outage Notification System (EONS) to include Zip Code level alerting to include in-language notifications to align with its existing notification abilities for SCE customers

**Status Update:** Zip code level and in-language notification enhancements (in Spanish, Mandarin, Cantonese, Vietnamese, Korean, and Tagalog) were implemented and used during PSPS events in 2020.

### Cal OES

#### **De-Energization Notifications (PSPS-1.2)**

Section 5.3.6.7 Page 171

**Program Target:** Notify Cal OES through the State Warning Center of possible de-energization

**Status Update:** Through the end of December the PSPS Incident Management Team (IMT) was activated for 12 events. Notifications were sent out to stakeholders during each event.

### Community Resource Centers

**243%**  
confirmed

#### **Community Resource Centers (PSPS-2)**

Section 5.3.6.5.1 Page 165

**Program Target:** Have 23 sites available across SCE service territory for customers impacted by a PSPS

**Status Update:** 56 CRCs have been contracted across 9 counties. Of these 56, 43 can operate with extended hours (8am to 10pm) per PSPS Phase 2 D.20-05-051.

### CPUC

#### **De-Energization Notifications (PSPS-1.3)**

Section 5.3.6.7 Page 171

**Program Target:** Notify the CPUC of possible de-energization

**Status Update:** Through the end of December the PSPS Incident Management Team (IMT) was activated for 12 events. Notifications were sent out to stakeholders during each event.

### Customer Resiliency Equipment

#### **Customer Resiliency Equipment Incentives (PSPS-3)**

Section 5.3.6.5.2 Page 166

**Program Target:** Develop a customer resiliency equipment incentive pilot program that provides financial support to customers willing to increase resiliency within its HFRA. One customer will be implemented for this pilot in 2020.

**Status Update:** The pilot program has been completed and the chosen location, a local high school, now has the ability to island itself from the grid and maintain emergency services during a power outage.

# WMP Activities Summary

Inactive
  Complete
  Ahead of Plan
  On Track
  Behind Plan, Likely to Meet Year-end Goal
  \* Behind Plan, Substantially Complete

## PSPS Activities

### IQCC Customer Battery Backup

#### **Critical Care Battery Backup Program (CCBB)\* (PSPS-4)**

Section 5.3.6.5.3 Page 166

**Program Target:** Outreach to eligible customers (low income, critical care, Tier 2/3) to provide portable battery back-up solution. SCE has identified approximately 2,500 customers that it will target for the program in 2020, with efforts to begin in the second quarter.

**Status Update:** The program launched on July 7<sup>th</sup> and by year end ~2,600 customers had been offered the program via direct outreach. Customer enrollments and battery deliveries started in Q3 and continued throughout Q4.

### Community Outreach

#### **Community Outreach (PSPS-7)**

Section 5.3.6.5.6 Page 168

**Program Target:** Minimum of five Community Crew Vehicles (CCVs) ready to be deployed during times when weather and fuel conditions are at critical levels. Communicate with customers in a local targeted way using a variety of channels to ensure timely delivery of notifications.

**Status Update:** A minimum of five CCVs were ready for deployment during each of SCE's PSPS activations in 2020. The CCV locator tool has featured on sce.com and been promoted during PSPS events. A virtual CCV website went live in Q3 offering customers wildfire safety resources and support.

### MICOP Partnership

#### **MICOP Partnership (PSPS-5)**

Section 5.3.6.5.4 Page 167

**Program Target:** Enable communications with indigenous populations and measure the number of customers contacted

**Status Update:** Mixteco/Indigena Community Organizing Project (MICOP) has exceeded the year-end goal of conducting wildfire safety outreach to 600 customers. In June, MICOP started follow-up phone calls with customers who had received the initial outreach. The target of 100 follow-ups has also been exceeded.

### Microgrid Assessment

#### **Microgrid Assessment (PSPS-8)**

Section 5.3.3.8.2 Page 124

**Program Target:** 1) Execute requests for proposals (RFP) for six resiliency microgrid projects, 2) Depending on RFP results, implementation of up to 6 resiliency microgrid projects shown to be technically feasible and cost-effective.

**Status Update:** The 2020 program target of issuing an RFP for six potential 2020 microgrid projects was completed. However, this RFP did not yield any cost-effective options. Learning from this experience, SCE evaluated alternative microgrid sites that could be safely and more economically islanded and issued a second microgrid RFP. SCE received a higher response rate than the RFP issued earlier in 2020, evaluated the submissions, and recommended proceeding with one vendor for a potential 2022 deployment.

### Independent Living Center Partnerships

#### **Independent Living Centers Partnership (PSPS-6)**

Section 5.3.6.5.5 Page 167

**Program Target:** Conduct outreach activities and workshops/trainings to provide preparedness education and assistance in applying for the Medical Baseline Program and measure the number of customers contacted

**Status Update:** The Independent Living Centers (ILCs) program exceeded the target holding 10 workshops/trainings for customers with disabilities and others with access and functional needs in June.

\*Formerly called the Income Qualified Critical Care (IQCC) Customer Battery Backup Incentive



# WMP Activities Summary

 Inactive  Complete  Ahead of Plan  On Track  Behind Plan, Likely to Meet Year-end Goal  \* Behind Plan, Substantially Complete

## Operational Practices and Risk Analysis Activities

### OP: Operational Practices

#### Annual SOB 322 Review

##### **Annual SOB 322 Review (OP-1)**

Section 5.3.6.1.1 Page 161

**Program Target:** Review and update SOB 322 to reflect lessons learned from past elevated fire weather threats/PSPS events and integrate, where applicable, new and improved situational awareness data, improved threat indicators, and applicable regulatory requirements in an effort to reduce wildfire risk and the impact of outages on customers.

**Status Update:** Completed the annual SOB 322 bulletin, reflecting lessons learned from 2019, elevated threats, and PSPS events.

#### Wildfire Infrastructure Protection Staffing

##### **Wildfire Infrastructure Protection Team Additional Staffing (OP-2)**

Section 5.3.6.5.7 Page 168

**Program Target:** Hire additional resources including: a senior compliance manager, two compliance advisors, a project/program advisor, a data specialist and a fire-weather meteorologist. PSPS Operations will also be staffed to provide dedicated operational, project management, and compliance capabilities.

**Status Update:** PSPS Operations hiring was completed in November. Consultants are bridging the gap in Project Management and Compliance competencies until full time SCE employees can be hired.

#### UAS Operations Training

##### **Unmanned Aerial (UAS) Operations Training (OP-3)**

Section 5.3.4.9.2.2. Page 143

**Program Target:** Increase the number of UAS operators by an additional 50 crews

**Status Update:** Substantially complete. The goal of training an additional 50 UAS operators was not met, however, 43 resources passed the FAA 107 exam despite the closure of FAA testing centers due to COVID from March through July.

### RA: Risk Analysis

#### Expansion of Risk Analysis







##### **Expansion of Risk Analysis (RA-1)**

Section 5.3.2.7. Page 111

**Program Target:** Implement Wildfire Risk Reduction Model (WRRM) module of Technosylva (software platform)

**Status Update:** Technosylva delivered the WRRM software to SCE in Q4 2020. Following its quality review of the data and functionality of the WRRM software, SCE deemed that it met its requirements. SCE will continue working with Technosylva to incorporate enhancements throughout 2021.

# WMP Activities Summary

 Inactive  Complete  Ahead of Plan  On Track  Behind Plan, Likely to Meet Year-end Goal  \* Behind Plan, Substantially Complete

## Vegetation Management Activities

HTMP  
133%

trees assessed

97%

trees mitigated  
within 180 days

### **Hazard Tree Management Program (VM-1)**

Section 5.3.5.16.1 Page 156

**Program Target:** Assess 75,000 trees for hazardous conditions and perform prescribed mitigations in accordance with program guidelines and schedules

**Status Update:** Assessed ~99,500 of 75,000 trees through Q4 and mitigated 97% of trees within 180 days, which exceeded the WMP Program Target.

DRI  
Inspections &  
Mitigations

### **Drought Relief Initiative (DRI) Inspections and Mitigations (VM-4)**

Section 5.3.5.16.2 Page 158

**Program Target:** Perform DRI annual inspection scope and complete prescribed mitigations in accordance with internal DRI program guidelines

**Status Update:** Drought Relief Initiative (DRI) inspections met year-end goal. 3rd (and final) cycle inspections completed mid-December. DRI mitigations exceeded year-end goal with 95% of active inventory aged less than 180 days, which exceeded the WMP target of 94%.

Expanded Pole  
Brushing

117%

poles cleared

### **Expanded Pole Brushing (VM-2)**

Section 5.3.5.5.1 Page 153

**Program Target:** Perform brush clearance of 200,000 poles SCE will strive to perform brush clearance for 300,000 poles subject to resource constraints and other execution risks

**Status Update:** Pole clearances exceeded the WMP Target of 200K in November and ended the year at ~233,900 pole clearances.

Vegetation  
Management  
Quality  
Control

### **Vegetation Management Quality Control (VM-5)**

Section 5.3.5.13 Page 155

**Program Target:** Perform 3,000 risk-based HFRA circuit mile vegetation management Quality Control inspections

**Status Update:** Performed ~6,100 of 3,000 of risk-based HFRA circuit mile quality control inspections.

Expanded  
Clearances  
for Legacy  
Facilities

### **Expanded Clearances for Legacy Facilities (VM-3)**

Section 5.3.5.5.2 Page 153

**Program Target:** Perform assessments of all identified facilities in HFRA. Establish enhanced buffers at 30% of identified facilities

**Status Update:** The activity was completed in December as enhanced buffers were completed at 39% (61) identified facilities, surpassing the original goal of 30% (46).

# WMP Activities Summary

Inactive
  Complete
  Ahead of Plan
  On Track
  Behind Plan, Likely to Meet Year-end Goal
  \* Behind Plan, Substantially Complete

## Situational Awareness Activities

### Weather Stations

157%  
installed

#### **Weather Stations (SA-1)**

Section 5.3.2.1 Page 104

**Program Target:** Install 375 Weather Stations. SCE will strive for installation of 475 Weather Stations subject to resource constraints and other execution risks

**Status Update:** ~590 of 375 weather stations installed. Exceeded WMP Program target and exceeded the strive target of 475 installations.

### Fire Potential Index Phase II

#### **Fire Potential Index (FPI) Phase II (SA-2)**

Section 5.3.2.4.1 Page 107

**Program Target:** Refine the current FPI by integrating historical weather and vegetation data into the index

**Status Update:** Completed development of FPI 2.0 which factors in different fuel types (e.g. grass, timber, or brush) and historical weather data. Historical weather data was received in Q2. New fuel loading map and FPI 2.0 formulas were completed in Q4.

### HPCC Weather Modeling System

#### **High-Performing Computer Cluster (HPCC) Weather Modeling System (SA-3)**

Section 5.3.2.6 Page 110

**Program Target:** Complete installation of second HPCC

**Status Update:** Completed the installation of second HPCC weather modeling system—It is in operational use.

### Asset Reliability & Risk Analysis

#### **Asset Reliability & Risk Analytics Capability (SA-4)**

Section 5.3.2.7 Page 111

**Program Target:** Implement FireCast and FireSim modules of Technosylva

**Status Update:** Completed implementation of FireCast and FireSim applications and fire scientist training. Performed fire simulations in Q4.

### Fuel Sampling Program

#### **Fuel Sampling Program (SA-5)**

Section 5.3.2.4.2 Page 108

**Program Target:** Perform updated fuel sampling in HFRA in areas deemed appropriate once every two weeks (weather permitting)

**Status Update:** Initiated fuel sampling in all four regions specified in the WMP (Inland Empire, North LA County, Eastern Sierra, Western Sierra). Fuel sampling continued in all four regions through year-end.

### Surface and Canopy Fuels Mapping

#### **Surface and Canopy Fuels Mapping (SA-6)**

Section 5.3.2.4.3 Page 108

**Program Target:** Initiate surface and canopy fuels mapping across HFRA

**Status Update:** Vendor began work to refresh the fuels/surface canopy dataset in SCE territory in Q4. The program will improve fire spread modeling capabilities.

### Remote Sensing / Satellite Fuel Moisture

#### **Remote Sensing / Satellite Fuel Moisture (SA-7)**

Section 5.3.2.4.4 Page 109

**Program Target:** Initiate procurement process for remote sensing technology for future implementation

**Status Update:** Procurement was initiated for a wind profiling pilot using LiDAR in the lower atmosphere of the Eastern Sierra. Contract was in the close to finalization by the end of 2020.

### Fire Science Enhancements

#### **Fire Science Enhancements (SA-8)**

Section 5.3.2.4.5 Page 109

**Program Target:** Implement enhanced forecasting capability and improved fuel modeling

**Status Update:** Ensemble forecasting was implemented in Q3 and will increase the frequency of modeling to receive a range of outputs for forecasting.

# WMP Activities Summary

Inactive
  Complete
  Ahead of Plan
  On Track
  Behind Plan, Likely to Meet Year-end Goal
  \* Behind Plan, Substantially Complete

## Emergency Preparedness Activities

### Dear Neighbor Letter

#### **Customer Education and Engagement – Dear Neighbor Letter (DEP-1.1)**

Section 5.3.9.2 Page 196

**Program Target:** Send ~915,000 letters with information about PSPS, emergency preparedness, and SCE's wildfire mitigation plan to customer accounts in HFRA and ~3,200,000 letters to customer accounts in non-HFRA

**Status Update:** Mailings have been completed to all customers (both HFRA and non-HFRA). COVID messaging was included in the newsletter along with contact information in 15 languages.

### Community Meetings

#### **Customer Education and Engagement – Community Meetings (DEP-1.2)**

Section 5.3.9.2 Page 196

**Program Target:** Host 8-12 community meetings in areas impacted by 2019 PSPS plus other meetings including online as determined to share information about PSPS, emergency preparedness, and SCE's wildfire mitigation plan

**Status Update:** Nine virtual Community Meetings were held by the end of Q2. No additional Community Meetings were planned in 2020.

### Marketing Campaign

#### **Customer Education and Engagement – Marketing Campaign (DEP-1.3)**

Section 5.3.9.2 Page 196

**Program Target:** Marketing campaign to reach 5,000,000 Customer Accounts (goal of 40% awareness about the purpose of PSPS, emergency preparedness, and SCE's wildfire mitigation plan)

**Status Update:** The 2020 marketing campaign was launched in May and SCE tracked PSPS and emergency awareness throughout the year. Average monthly awareness throughout 2020 was ~56%.

### SCE Emergency Response Training

#### **SCE Emergency Response Training (DEP-2)**

Section 5.3.9.1 Page 194

**Program Target:** Hold SCE IMT member training on de-energization protocols, determine additional staffing needs and train, exercise and qualify new staff

**Status Update:** All annual trainings and exercises have been completed for 2020. The trainings and exercises were completed virtually as a result of COVID. Additional staffing for a permanent PSPS IMT have been hired.

### IOU Customer Engagement

#### **IOU Customer Engagement (DEP-3)**

Section 5.3.9.2 Page 196

**Program Target:** Participate in statewide multichannel and multi-lingual campaign using digital ads, social media ads, and radio ads to provide customers with important and consistent messaging about wildfire mitigation activities happening across the state

**Status Update:** SCE has determined there is no need for a separate statewide customer engagement campaign in addition to SCE's local market campaign and informed CalOES of this change in direction. SCE further described this change in its June 1, 2020 Off-Ramp and September 11<sup>th</sup> Change Report. SCE's local PSPS education campaign launched in May 2020 across digital channels and continued throughout wildfire season.

### Customer Research and Education

#### **Customer Research and Education (DEP-4)**

Section 5.3.9.2 Page 196

**Program Target:** Develop/implement various research activities that gauge customer awareness, preparedness for, and satisfaction with outage experiences; to include but not be limited to: town hall meetings, online & telephone surveys, focus groups, and assessments of programs & services to prepare customers before and after PSPS outages

**Status Update:** Town hall meetings were completed and a report summarizing findings was published. Online and telephone surveys were conducted on programs (e.g., CRCs/CCVs). Assessments of customer preparations before and after PSPS outages were conducted through Voice of Customer surveys.

# WMP Activities Summary

Inactive
  Complete
  Ahead of Plan
  On Track
  Behind Plan, Likely to Meet Year-end Goal
  \* Behind Plan, Substantially Complete

## System Hardening Activities

### Covered Conductor

**137%**  
Circuit Miles Installed

#### **Covered Conductor (SH-1)**

Section 5.3.3.3.1 Page 118

**Program Target:** Install 700 circuit miles of covered conductor in HFRA. While 700 circuit miles is SCE's program target, SCE will strive to complete 1,000 circuit miles subject to resource constraints and other execution risks.

**Status Update:** ~960 of 700 circuit miles installed.

### Undergrounding Overhead Conductor

#### **Undergrounding Overhead Conductor (SH-2)**

Section 5.3.3.16 Page 130

**Program Target:** Refine evaluation methodology for targeted undergrounding as a wildfire mitigation activity

**Status Update:** Team refined targeted undergrounding methodology and began scoping work for 2021.

### Fire Resistant Poles

**117%**  
Poles Installed

#### **Fire Resistant Poles (SH-3)**

Section 5.3.3.6.1 Page 121

**Program Target:** Replace 5,200 poles with fire resistant poles in HFRA. SCE will strive to replace 11,700 poles with fire resistant poles in HFRA subject to pole loading assessment results, resource constraints and other execution risks

**Status Update:** ~6,090 of 5,200 poles installed.

### Branch Line Protection Strategy

**100%**  
Locations

#### **Branch Line Protection Strategy (SH-4)**

Section 5.3.3.7 Page 123

**Program Target:** Install/replace fuses at 3,025 locations

**Status Update:** 3,025 of 3,025 locations installed/replaced fuses.

### Install RAR/RCS

**109%**  
RARs/RCSs Installed

#### **Installation of System Automation Equipment – RAR/RCS (SH-5)**

Section 5.3.3.9 Page 125

**Program Target:** Install 45 RARs/RCSs

**Status Update:** 49 of 45 RARs/RCSs installed and operationalized.

### Circuit Breaker Relay Hardware for Fast Curve

**181%**  
Installed

#### **Circuit Breaker Relay Hardware for Fast Curve (SH-6)**

Section 5.3.3.2.7 Page 118

**Program Target:** Replace/upgrade 55 relay units in HFRA. SCE will strive to replace up to 110 relay units in HFRA. These targets are subject to resource constraints and other execution risks.

**Status Update:** ~100 of 55 fast curve relay setting installed and placed into service.

### PSPS-Driven Grid Hardening Work

#### **PSPS-Driven Grid Hardening Work (SH-7)**

Section 5.3.3.8.1 Page 123

**Program Target:** Review 50% of all distribution circuits within HFRA to determine if modifications may improve sectionalizing capability within HFRA

**Status Update:** Review of all 550 in-scope distribution HFRA circuits was completed, and sectionalization and other grid-hardening (e.g. covered conductor) modifications were proposed.

### Transmission Open Phase Detection

#### **Transmission Open Phase Detection (SH-8)**

Section 5.3.2.2.3 Page 106

**Program Target:** Continue deployment of transmission open phase detection on six additional transmission/subtransmission circuits

**Status Update:** All six circuits are in service and are under observation.

# WMP Activities Summary

Inactive
  Complete
  Ahead of Plan
  On Track
  Behind Plan, Likely to Meet Year-end Goal
  \* Behind Plan, Substantially Complete

## System Hardening Activities

### Transmission Overhead Standards

#### **Transmission Overhead Standards (TOH) Review (SH-9)**

Section 5.3.3.18 Page 132

**Program Target:** Review transmission standards to determine if there are any changes that can be made to help reduce wildfire threats, especially during extreme wind events

**Status Update:** Completed review of historical transmission outage data and identified several recommended updates for TOH standards that will be adopted in 2021.

### Tree Attachment Remediation

**123%**  
Remediated

#### **Tree Attachment Remediation (SH-10)**

Section 5.3.3.3.2 Page 120

**Program Target:** Remediate 325 tree attachments. SCE will strive to complete 481 tree attachment remediations subject to resource constraints and other execution risks

**Status Update:** ~400 tree attachments were remediated in 2020, exceeding the WMP target. The majority, 369, of these tree attachments were scoped for future years (e.g., 2021) but were removed as a result of wildfires in the second half of the year. Documentation for this methodology and rationale was captured in the 2021 WMP Update to the WSD.

### Legacy Facilities

#### **Legacy Facilities (SH-11)**

Section 5.3.3.19 Page 132

**Program Target:** Evaluate risk, scope, and alternatives for identified circuits; evaluation of additional system hardening mitigation for wildlife fault protection and grounding/lightning arresters

**Status Update:** Risk evaluations on hydro control circuits and grounding study reports on two high priority sites were completed in December. Risk evaluations for low voltage sites were completed in November. Wildlife risk evaluation was completed in July.

### Remediation – Distribution

#### **Remediations - Distribution (SH-12.1)**

Section 5.3.3.12.1 Page 127

**Program Target:** Remediate 100% of notifications with ignition risk in accordance with CPUC requirements, non-inclusive of notifications which meet the criteria of a valid exception

**Status Update:** Substantially complete. As of the end of December, Distribution Remediation finished at 97% complete, missing the WMP Program target of 100%. Prior to year-end Distribution Remediations were at risk of not meeting the goal due to resource diversion to restoration efforts from catastrophic fires and other precautions taken due to record dry fuel conditions. COVID related restrictions on outages, and PSPS activations also continually delayed and slowed work throughout the year.

### Remediations – Transmission

#### **Remediations - Transmission (SH-12.2)**

Section 5.3.3.12.2 Page 128

**Program Target:** Remediate 100% of notifications with ignition risk in accordance with CPUC requirements, non-inclusive of notifications which meet the criteria of a valid exception

**Status Update:** Substantially complete. As of the end of December, Transmission Remediation finished at 95% complete, missing the WMP Program target of 100%. Prior to year-end Transmission Remediations were at risk of not meeting the goal due to resource diversion to restoration efforts from catastrophic fires and other precautions taken due to record dry fuel conditions. COVID related restrictions on outages also continually delayed and slowed work throughout the year.

### Remediations – Generation

#### **Remediations - Generation (SH-12.3)**

Section 5.3.3.12.3 Page 129

**Program Target:** Remediate 100% of notifications with ignition risk in accordance with CPUC requirements, non-inclusive of notifications which meet the criteria of a valid exception

**Status Update:** Remediated 100% of generation notifications with ignition risk in accordance with CPUC requirements

# WMP Activities Summary

Inactive
  Complete
  Ahead of Plan
  On Track
  Behind Plan, Likely to Meet Year-end Goal
  \* Behind Plan, Substantially Complete

## Alternative Technologies Activities

### MADEC

#### **Alternative Technology Pilots - Meter Alarming for Downed Energized Conductor (MADEC) (AT-1)**

Section 5.3.3.2.2 Page 115

**Program Target:** Evaluating algorithm improvements specific to the detection of downed energized covered conductor, which may behave differently than bare conductor

**Status Update:** SCE collected and analyzed meter alarm data to build an event database to enhance the MADEC algorithm. As of year-end, there were no meter alarms specific to downed, energized covered conductor to enhance the algorithm for this type of event. SCE anticipates it may take several years to collect enough datapoints for thorough analysis.

### Ground Fault Neutralizer

#### **Alternative Technology Evaluations: Rapid Earth Fault Current Limiter – Ground Fault Neutralizer (GFN) (AT-3.1)**

Section 5.3.3.2.3.1 Page 115

**Program Target:** Initiate engineering design and order equipment for a GFN field installation

**Status Update:** Final substation engineering and design for Ground Fault Neutralizers was released in December with construction scheduled to begin in Q1 2021. GFN equipment was received ahead of schedule in 2020.

### Distribution Fault Anticipation

#### **Distribution Fault Anticipation (DFA) (AT-2.1)**

Section 5.3.2.2.1 Page 106

**Program Target:** Evaluate technology performance on fault anticipation technology and future deployment

**Status Update:** An evaluation report of the performance of the 60 installed Distribution Fault Anticipation (DFA) units was completed in Q4. SCE also developed a 2021 deployment plan for additional DFA units.

### Resonant Grounding

#### **Alternative Technology Evaluations: Rapid Earth Fault Current Limiter – Resonant Grounding with Arc Suppression Coil (AT-3.2)**

Section 5.3.3.2.3.2 Page 116

**Program Target:** Initiate engineering design to convert a typical substation to resonant grounding

**Status Update:** Final substation engineering and design for resonant grounded substation was released in December with construction scheduled to begin in Q2 2021.

### Advanced UAS Study

#### **Advanced Unmanned Aerial Systems Study (AT-2.2)**

Section 5.3.4.9.2.1 Page 142

**Program Target:** Conduct additional Extended Visual Line of Sight (EVLOS) demonstration UAS flights using lessons learned from 2019 study and validate aerial patrol findings via truck, foot, or helicopter

**Status Update:** Despite the UAS team being diverted to support fire restoration efforts in Q4, the second round of UAS demonstration flights were successfully conducted with multiple vendors and validated by inspectors along a 11.5-mile segment.

### Isolation Transformer

#### **Alternative Technology Evaluations: Rapid Earth Fault Current Limiter – Isolation Transformer (AT-3.3)**

Section 5.3.3.2.3.3 Page 116

**Program Target:** Install one Rapid Earth Fault Current Limiter - Isolation Transformer

**Status Update:** The Rapid Earth Fault Current Limiter - Isolation Transformer was successfully tested and commissioned in Q4.



# WMP Activities Summary

Inactive
  Complete
  Ahead of Plan
  On Track
  Behind Plan, Likely to Meet Year-end Goal
  \* Behind Plan, Substantially Complete

## Alternative Technologies Activities

### Distribution Open Phase Detection

#### **Alternative Technology Evaluations – Distribution Open Phase Detection (AT-3.4)**

Section 5.3.3.2.4 Page 117

**Program Target:** Complete pilot installation for five circuit locations

**Status Update:** Distribution open phase detection logic has been deployed at five pilot locations as of mid-Q3. These locations have been in-serviced and are now in observation mode for alarming to validate and test the logic.

### Partial Discharge Assessment

#### **Assessment of Partial Discharge for Transmission Facilities (AT-6)**

Section 5.3.4.10.2.1 Page 144

**Program Target:** Evaluate use of a Partial Discharge assessment technology to assess the health of in-service transmission assets

**Status Update:** Team conducted a benchmark assessment for Transmission Partial Discharge based on survey data, industry research, and engineering analysis. Team developed an assessment report with its findings and recommendations.

### Vibration Dampers

#### **Alternative Technology Implementation – Vibration Dampers (AT-4)**

Section 5.3.3.3.3 Page 120

**Program Target:** Evaluate damper technologies for both small and large diameter covered conductor applications and develop standards for small and large diameter covered conductors

**Status Update:** SCE completed the evaluation of damper technologies and published new standards incorporating vibration damper applications for both large and small diameter covered conductor in Q4. SCE's analysis validated that dampers help prevent conductor strain.

### Early Fault Detection Evaluation

#### **Early Fault Detection (EFD) Evaluation (AT-7)**

Section 5.3.2.2.2 Page 106

**Program Target:** Develop installation standards, install, and commission at least 10 EFD sensors. Gather data to determine requirements to support the potential for larger system deployments. SCE will strive to complete an additional 90 sensors for evaluation subject to resource constraints and other execution risks

**Status Update:** Team developed installation standards and completed field installation of 33 EFD units.

### Asset Defect Detection Using

#### **Asset Defect Detection Using Machine Learning Object Detection (AT-5)**

Section 5.3.4.9.1.1 Page 140

**Program Target:** Begin standardization of data collection for Machine Learning (ML) by cataloging and tagging inspection imagery metadata for ML. Investigate SCE use cases and evaluate feasibility of ML to support objective evaluation of assets

**Status Update:** Documentation of 2020 machine learning findings began in December and is expected to be completed in Q1 2021. In 2020 SCE developed a process for collecting and tagging images to support machine learning model development and explored collaboration opportunities with a ML vendors.

### High Impedance Relay Evaluations

#### **High Impedance Relay Evaluations (AT-8)**

Section 5.3.3.2.5 Page 117

**Program Target:** Investigate and deploy two controllers/relays with a High Impedance (Hi-Z) element in HFRA

**Status Update:** SCE installed high impedance elements at two distribution pilot locations in Q3. SCE is monitoring these installations in "alarm" mode to validate that the alarm logic is working as expected.



# WMP Activities Summary

Inactive
  Complete
  Ahead of Plan
  On Track
  Behind Plan, Likely to Meet Year-end Goal
  \* Behind Plan, Substantially Complete

## Inspections Activities

### Distribution HFRII in HFRA

**190%**  
structures  
inspected

#### **Distribution High Fire Risk Informed Inspections (HFRII) in HFRA (IN-1.1)\***

Section 5.3.4.9.1 Page 139

**Program Target:** Inspect 105,000 structures in HFRA

**Status Update:** ~199,000 of 105,000 structures inspected in HFRA.

### Distribution Infrared Inspections

#### **Infrared Inspection of Energized Overhead Distribution Facilities and Equipment (IN-3)**

Section 5.3.4.4 Page 137

**Program Target:** Inspect 50% of distribution circuits in HFRA

**Status Update:** Completed goal of inspecting 50% of distribution circuit miles in HFRA in Q4.

### Transmission HFRII in HFRA

**158%**  
structures  
inspected

#### **Transmission High Fire Risk Informed Inspections (HFRII) in HFRA (IN-1.2)\***

Section 5.3.4.10.1 Page 143

**Program Target:** Inspect 22,500 structures in HFRA

**Status Update:** ~35,500 of 22,500 structures inspected in HFRA.

### Transmission Infrared Inspections

#### **Infrared Inspection, Corona Scanning, and High Definition Imagery of Energized Overhead Transmission facilities and Equipment (IN-4)**

Section 5.3.4.5 Page 138

**Program Target:** Inspect 1,000 transmission circuit miles in HFRA

**Status Update:** 1,000+ circuit miles inspected in HFRA.

### Quality Oversight / Quality Control

**116%**  
structures  
inspected

#### **Quality Oversight / Quality Control (IN-2)**

Section 5.3.4.14 Page 146

**Program Target:** Perform quality control and oversight of inspections of 15,000 transmission, distribution, and generation structures in HFRA

**Status Update:** Performed quality control on ~17,400 of 15,000 structures in HFRA.

### Generation HFRII in HFRA

#### **Generation High Fire Risk Informed Inspections in HFRA (IN-5)**

Section 5.3.4.16 Page 147

**Program Target:** Perform inspection of 200 generation-related assets

**Status Update:** ~290 of 200 structures inspected in HFRA.

\* The Change Report filed in September 2020 describes that SCE plans to inspect ~165,000 distribution and ~33,500 transmission structures in HFRA in 2020.

## Inspections Activities

### Aerial Inspections – Distribution

**102%**  
structures inspected

#### **Aerial Inspections - Distribution (IN-6.1)**

Section 5.3.4.9.2 Page 141

**Program Target:** Inspect 165,000 structures in HFRA

**Status Update:** ~168,000 of 165,000 structures inspected in HFRA. The start of 2020 aerial inspections were delayed due to COVID restrictions preventing aerial inspectors from accessing the on-site inspection room. Restarted inspections in Q2. Catastrophic fires and environmental factors (visibility, winds, heat) in the second half of the year caused inspection progress to slow, but the goal of 165,000 distribution structures in HFRA was met.

### Failure Modes and Effects Analysis

#### **Failure Modes and Effects Analysis (IN-7)**

Section 5.3.4.15.1 Page 147

**Program Update:** Complete FMEA study for substation assets in HFRA and prepare final report

**Status Update:** The working group began developing FMEA risk identification in Q2 and completed it in Q3. The final assessment report, documenting the findings and recommendations, was completed in Q4.

### Aerial Inspections – Transmission

**94%**  
structures inspected

#### **Aerial Inspections - Transmission (IN-6.2)**

Section 5.3.4.10.2 Page 144

**Program Target:** Inspect 33,500 structures in HFRA

**Status Update:** Substantially complete. ~31,380 of 33,500 structures inspected in HFRA. The start of 2020 aerial inspections were delayed due to COVID restrictions preventing aerial inspectors from accessing the on-site inspection room. Restarted inspections in Q2. Catastrophic fires and environmental factors (visibility, winds, heat) in the second half of the year caused inspection progress to slow. FAA flight restrictions in sensitive areas (government, wildlife) prevented a portion of scope from being captured.

# Appendix

Behind Plan Activities Details

# WMP Activities Details

## Behind Plan Activities

Inactive
  Complete
  Ahead of Plan
  On Track
  Behind Plan, Likely to Meet Year-end Goal
  \* Behind Plan, Substantially Complete

Status	Current Goal	Narrative
	OP-3: Unmanned Aerial (UAS) Operations Training  <b>Increase the number of UAS operators (FAA certified drone pilot) by an additional 50 crews</b>	<p><b>Summary:</b> As of the end of December, 43 resources had passed the FAA 107 exam. FAA-contracted testing centers were closed until July due to COVID shutdowns.</p> <p><b>Progress:</b></p> <ul style="list-style-type: none"> <li>43 resources attempted and passed the FAA exam (100% pass rate)                             <ul style="list-style-type: none"> <li>Of these, 31 resources passed the exam in Q4</li> </ul> </li> <li>SCE held three training courses in September and October to help employees prepare for the FAA 107 certification exam</li> </ul> <p><b>Risks or Challenges:</b></p> <ul style="list-style-type: none"> <li>FAA 107 exams need to be taken in-person at designated testing centers. These testing centers were closed from March until July due to COVID shutdowns.</li> <li>Employees within the Transmission and Distribution organizations have been highly impacted by PSPS constraining their ability to study, schedule and sit for the FAA 107 exam by year-end 2020.</li> </ul> <p><b>Actions to Improve Performance / Get Well Plan:</b></p> <ul style="list-style-type: none"> <li>Planning for 2021 certifications and tracking an additional 7 resources to take and pass the FAA exam</li> </ul>

# WMP Activities Details

## Behind Plan Activities

Inactive
  Complete
  Ahead of Plan
  On Track
  Behind Plan, Likely to Meet Year-end Goal
  \* Behind Plan, Substantially Complete

Status	Current Goal	Narrative
	SH-12.1: Distribution Remediations  <b>Remediate 100% of notifications with ignition risk in accordance with CPUC requirements, non-inclusive of notifications which meet the criteria of a valid exception</b>	<p><b>Summary:</b> As of the end of December, Distribution Remediation finished at 97% complete, missing the WMP Program target of 100%. Prior to year-end, Distribution Remediations were at risk of not meeting the goal due to resource diversion to restoration efforts from catastrophic fires and other precautions taken due to record dry fuel conditions. COVID-related restrictions on outages, and PSPS activations also continually delayed and slowed work throughout the year.</p> <p><b>Progress:</b></p> <ul style="list-style-type: none"> <li>Two regions completed 100% of their 2020 notifications. Remaining regions will complete 2020 notifications in 2021.</li> </ul> <p><b>Risks or Challenges:</b></p> <ul style="list-style-type: none"> <li>Timely remediation of notifications was impacted in August and September due to unforeseen constraints from catastrophic fires including resource diversion to fire restoration efforts.</li> <li>Other precautions were taken due to record dry fuel conditions, which further diverted resources away from WMP scope.</li> <li>COVID restrictions and PSPS activations delayed and/or disallowed outages in many areas, impacting ability to safely perform work timely and maintain production</li> </ul> <p><b>Actions to Improve or Sustain Performance:</b></p> <ul style="list-style-type: none"> <li>Detailed line-by-line analysis of the outstanding 2020 notifications is being conducted to help all Regions clear remaining obstacles to completion</li> </ul>

# WMP Activities Details

## Behind Plan Activities

Inactive
  Complete
  Ahead of Plan
  On Track
  Behind Plan, Likely to Meet Year-end Goal
  \* Behind Plan, Substantially Complete

Status	Current Goal	Narrative
	SH-12.2: Transmission Remediations  <b>Remediate 100% of notifications with ignition risk in accordance with CPUC requirements, non-inclusive of notifications which meet the criteria of a valid exception</b>	<p><b>Summary:</b> As of the end of December, Transmission Remediation finished at 95% complete, missing the WMP Program target of 100%. Prior to year-end, Transmission Remediations were at risk of not meeting the goal due to resource diversion to restoration efforts from catastrophic fires and other precautions taken due to record dry fuel conditions. COVID related restrictions on outages also continually delayed and slowed work throughout the year.</p> <p><b>Progress:</b></p> <ul style="list-style-type: none"> <li>SCE completed almost all Right of Way (ROW) notifications in 2020, an improvement from 2019</li> <li>The two Grids with the most remaining 2020 notifications were North Coast and San Joaquin.</li> </ul> <p><b>Risks or Challenges:</b></p> <ul style="list-style-type: none"> <li>Timely remediation of notifications was impacted in August and September due to unforeseen constraints from catastrophic fires including resource diversion to fire restoration efforts.</li> <li>Other precautions were taken due to record dry fuel conditions, which further diverted resources away from WMP scope.</li> <li>As with Distribution Remediations (12.1), COVID restrictions and PSPS activations delayed and/or disallowed outages in many areas, impacting ability to safely perform work timely and maintain production</li> </ul> <p><b>Actions to Improve or Sustain Performance:</b></p> <ul style="list-style-type: none"> <li>Line-by-line analysis of the outstanding 2020 notifications is being done to help all Regions clear remaining obstacles to completion.</li> </ul>

# WMP Activities Details

## Behind Plan Activities

Inactive
  Complete
  Ahead of Plan
  On Track
  Behind Plan, Likely to Meet Year-end Goal
  \* Behind Plan, Substantially Complete

Status	Current Goal	Narrative
	IN-6.2: Aerial Inspections – Transmission  <b>IN-6.2: Inspect 33,500 structures in HFRA</b>	<p><b>Summary:</b> As of the end of December, aerial inspections have been completed on ~31,380 transmission structures in HFRA. This is ~6% short of the WMP Goal of 33,500.</p> <p><b>Progress:</b></p> <ul style="list-style-type: none"> <li>In Q4, inspections were completed on an additional ~9,080 structures in HFRA.</li> </ul> <p><b>Risks or Challenges:</b></p> <ul style="list-style-type: none"> <li>COVID shutdowns had several impacts throughout 2020. The initial March shutdown caused delays in planning and starting inspections as the team adjusted to working from home and social distancing requirements. Image capture was also impacted by equipment delays at the border and drone crews being deployed back to home states.</li> <li>The aerial team faced challenges in collection of scope for several additional reasons:                         <ul style="list-style-type: none"> <li>Inability to complete full inspections based on imagery provided by vendor</li> <li>Inability to access structures (limited access routes on foot, military restrictions, U.S. Forest Service work restrictions during fire season)</li> <li>FAA Temporary Flight Restrictions (TFR), specifically in air space surrounding active fires</li> <li>Internal master data inconsistencies</li> </ul> </li> </ul> <p><b>Actions to Improve or Sustain Performance:</b></p> <ul style="list-style-type: none"> <li>The aerial team is in the process of evaluating structures that were not completed or partially completed in 2020 to determine which structures can be rolled over for inspection in 2021 and which structures are unlikely to be captured from the air due to a permanent condition (e.g., geographical restrictions).</li> <li>In 2021 the aerial team is targeting inspections to start earlier in the year (e.g., Q1 2021) to make greater progress ahead of fire season.</li> </ul>